

HYDROGEN DIFFUSION HYBRID PORT AND METHOD OF FORMING

ABSTRACT

A hydrogen diffusion port for use in a packaged electronic device. In one embodiment, the hydrogen window is characterized by a substantial absence of plating from the external surfaces of the cover the base. The hydrogen diffusion port is selected from the group of materials consisting of palladium and its alloys, platinum and its alloys and titanium and its alloys The cover is welded to the base, and the hydrogen diffusion port is affixed to an aperture in the cover. The port is affixed by a low temperature process that can be accomplished after the cover is attached to the base to form a housing and the housing is degassed, without compromising the electronics within the housing and that does not require a partial pressure of hydrogen (which may be reintroduced into the materials) to accomplish, such as by soldering the diffusion port into the cover aperture, or by swaging the diffusion port into the cover aperture.